

WHAT IS CLAIMED IS:

1. An apparatus comprising:

a snowboard having a front and a rear and adapted and configured for accepting a standing operator;

5 a propulsion unit being adapted and configured for propelling said propulsion unit and said snowboard over snow, said propulsion unit having a front and a rear;

a ball joint interconnecting the front of said propulsion unit to the rear of said snowboard, said ball joint permitting said snowboard to rotate about said propulsion unit with at least two degrees of rotational freedom; and

10 a spring interconnecting said propulsion unit to said snowboard.

2. The apparatus of claim 1 wherein said spring interconnects the front of said propulsion unit to the rear of said snowboard, said spring being adapted and configured to apply a biasing force along a first axis, said ball joint being rotational about a longitudinal axis, and the first axis is displaced from the longitudinal axis.

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3. The apparatus of claim 1 wherein said ball joint permits said snowboard to rotate about said propulsion unit with at least three degrees of rotational freedom.

20 4. The apparatus of claim 1 wherein said spring is a coil spring.

5. The apparatus of claim 1 wherein said spring is a first spring adapted and configured to apply a biasing force along a first axis, the apparatus further comprising a

second spring interconnecting the front of said propulsion unit to the rear of said snowboard and adapted and configured to apply a biasing force along a second axis, and a third spring interconnecting the front of said propulsion unit to the rear of said snowboard and adapted and configured to apply a biasing force along a third axis, wherein the first axis is horizontally
5 displaced from the third axis, and the second axis is vertically displaced from the third axis.

6. The apparatus of claim 1 wherein said spring has a length and a pair of opposing ends along the length, one end being interconnected to said platform by a first sliding joint and the other end being interconnected to said propulsion unit by a second sliding
10 joint.

7. An apparatus comprising:

a user platform having a front and a rear and adapted and configured for accepting a standing operator;

15 a propulsion unit and being adapted and configured for propelling said propulsion unit and said platform, said propulsion unit having a front and a rear, the front of said propulsion unit being behind the rear of said platform;

a first spring interconnecting said propulsion unit to said platform and adapted and configured to apply a biasing force along a first axis, and a second spring interconnecting said
20 propulsion unit to said platform and adapted and configured to apply a biasing force along a second axis, wherein the first axis is horizontally displaced from the second axis.

8. The apparatus of claim 7 which further comprises a third spring interconnecting said propulsion unit to said platform and adapted and configured to apply a biasing force along a third axis, wherein the third axis is vertically displaced from the second axis.

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9. The apparatus of claim 7 which further comprises a ball joint interconnecting the front of said propulsion unit to the rear of said platform.

10. The apparatus of claim 7 wherein said first spring interconnects the front of said propulsion unit to the rear of said platform, said second spring interconnects the front of said propulsion unit to the rear of said platform, and said third spring interconnects the front of said propulsion unit to the rear of said platform.

11. The apparatus of claim 7 which further comprises an interconnecting joint between the rear of said platform and the front of said propulsion unit, said interconnecting joint permitting rotation of said platform relative to said propulsion unit about a first axis.

12. The apparatus of claim 7 which further comprises an interconnecting joint between the rear of said platform and the front of said propulsion unit, said interconnecting joint permitting rotation of said platform relative to said propulsion unit about two axes.

13. The apparatus of claim 7 which further comprises a universal joint between the rear of said platform and the front of said propulsion unit, said interconnecting joint

permitting rotation of said platform relative to said propulsion unit about three orthogonal axes.

14. A method for propelling a platform over snow, comprising:

5 providing a front platform to accept the feet of a standing operator and a propulsion unit ;

interconnecting the propulsion unit behind the front platform so that the front platform can rotate relative to the propulsion unit with at least two degrees of freedom;

steering the front platform by movement of the feet to cause rotation of the platform
10 relative to the propulsion unit; and

biasing the propulsion unit relative to the front platform in a direction to return the propulsion unit to a location behind the front platform.

15. The method of claim 14 wherein said biasing includes a spring.

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16. The method of claim 14 wherein said interconnecting is by a U joint.

17. The method of claim 14 wherein said interconnecting is by a ball joint.

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18. The method of claim 14 wherein the front platform is a snowboard and the propulsion unit is adapted and configured for propelling the front platform over snow.

19. The method of claim 14 wherein the front platform is a skateboard and the propulsion unit is adapted and configured for propelling the front platform over a roadway.

5 20. An apparatus comprising:

a snowboard having a front and a rear and adapted and configured for accepting a standing operator;

a propulsion unit driving tracks adapted and configured for propelling said propulsion unit and said snowboard over snow, said propulsion unit having a front and a rear;

10 a ball joint interconnecting the front of said propulsion unit to the rear of said snowboard, said ball joint permitting said snowboard to rotate about said propulsion unit with three degrees of freedom; and

a dampener interconnecting said propulsion unit to said snowboard.

15 21. The apparatus of claim 19 wherein said dampener interconnects the front of said propulsion unit to the rear of said snowboard, said dampener being adapted and configured to apply a dampening force along a first axis, said ball joint being rotational about a longitudinal axis, and the first axis is displaced from the longitudinal axis.

20 22. The apparatus of claim 19 wherein said dampener is a first dampener adapted and configured to apply a dampening force along a first axis, and which further comprises a second dampener interconnecting the front of said propulsion unit to the rear of said snowboard and adapted and configured to apply a dampening force along a second axis, said

ball joint being rotational about a longitudinal axis, and the first axis is horizontally displaced from the longitudinal axis, and the second axis is vertically displaced from the longitudinal axis.

- 5 23. A method for propelling a platform over snow, comprising:
- providing a platform to accept an operator and a propulsion unit for the platform
- located behind said platform and aligned to an orientation relative to the platform;
- interconnecting the propulsion unit to the platform so that the platform can pivot
- relative to the propulsion unit; and
- 10 biasing the propulsion unit relative to the platform to return to the orientation after the
- platform pivots relative to the propulsion unit.